# STN UGC Pain Points

Mike

- I really just want the pitch of chips to never change, I pretty much never want that to happen
- Tool switching is super high friction. @ Rob Quinn 's radial menu makes it better, but I really wish I could just point at an input or output port and it would connect automatically

Zach

- When in VR and typing on the keyboard in palette search, I usually type two or three letters then see what I want and try to laser point to select it. Upon doing so, it doesn't actually select the palette item and just closes the keyboard. I have to then click the item again to actually select it. I wish it was just selected the first time.
- Inventions - it'll help to clean up inventions so that we can have people work on circuits in their own rooms and then bring them over to survive the night instead of having multiple people all trying to edit one scene, if at some point we have more than just Riley doing circuits
  - I want to be able to make private inventions with beta content that I can transport back and forth between my own personal rooms
  - I want to be able to make public inventions in beta rooms if the inventions themselves don't contain beta content
  - Would be super helpful to have invention versioning
- Am I blind or if you're on the select tool is there no way to deselect all besides either manually doing it or switching tools and then switching back
- It's really hard to trace wires if I have multiple that go a long distance and am trying to see what connects to where. When close by this is easy because you can highlight wires by looking at an input port, but that's only helpful if the other end of the wire is visible on screen when the camera is focused directly on an input port
- Reroute chip
  - I would like to be able to name the reroute chip for organizational purposes
  - I would like to be able to hook up Exec ports to the reroute chip
  - Make it not count towards chip count since it does nothing
- Circuit boards
  - (Minor) I'd love to be able to reorder Circuit Board inputs, as I find it convenient to build things out in room space and then convert to a Circuit Board after, but when I do that sometimes the inputs aren't in the order I would like and there's no solution there besides to either manually rewire or to just deal with it
  - See if we can get circuit boards to not count towards chip count (in bus, out bus, overall). This one isn't just organizational though since there is some local behavior (variables)
  - (Minor) When creating circuit boards from existing chips, the logic to generate input/output ports could be smarter. When you have one connection that leads to two separate chips, it will treat that as needing two inputs even though it could be achieved with just one
  - Renaming/adding/deleting ports shouldn't reset the scroll for the window. This makes configuring circuit board pins extremely frustrating.
  - Might have to wait for a Post-OM world: Would be nice to be able to copy and paste components into or out of a circuit board
  - Would be nice to be able to have function-ized circuit boards. Essentially, link two or more Circuit Boards together and if you edit one, it'll edit them all (or maybe just the base one is editable, and all others have to use a new Circuit Board Reference chip that you can't edit, if that's easier). We could also use this to optimize chip cost (see Riley's third bullet point)
    - May also want shared variable spaces across these function-ized circuit boards
  - I would like to be able to add in/out pins to a circuit board chip while inside and editing it easier than having to go into the configure menu on the plus button. There's a plus button there that feels like it should just be fast but it's really slow to do this process.
    - Would be especially nice if we could just drag a connection to the output board and it would automatically make a pin for us
- Wire tracing
  - Similar to how we can select an object and view a line to its object board, we should be able to select an event definition and view lines to all its event senders/receivers

Riley

- Circuits should always snap nicely together regardless of snap setting. Needing to use "surface snap" for chips to be readable and usable is annoying
- Switching tools is cumbersome and takes me out of the flow. Wish tools were more "Contextual". Looking at a port = connecting.
- It's painful that objects with the exact same board impose the same chip cost. It's very expensive to add a circuits feature to an object when its cloned as its a multiplicative cost.
- It's impossible to build single systems that can be maintained across multiple subrooms. Wish there was an "additive subroom" where you could put components/logic that would persist through subroom room loads.
- Want to "ctrl+f" chips/board names/event usage. search any string on a chip/board header and snap around the map "find next/find prev".
- I wish we had a stop gap solution for fixing bugs across the same objects. Something that happens consistently in STN development is needing to fix a bug in the generator, which there are several of in the map. In unity, this is done with prefabs. you go make the fix there and its everywhere. I know we want to upgrade our invention system to do this, but in the meantime id at least propose something in RRS that lets me replace the "old" versions with a specified "fixed" version to copy and past around the scene. Like our prefab replacer, but for RR Objects.
- Please put wire operations on the undo stack. If you accidentally unwire something that has lots of wires, you've just lost lots of work without being able to undo it.
- Knowing your heat usage on screens is impossible in certain scenarios because you need the maker pen out and ready
  - if you're holding something
  - respawning
  - Opening the maker pen really quickly makes the window big enough to cover the heat graphs (it breaks)

- It’s really hard to debug issues in MP scenarios generally. If you make a 40 person room, errors can happen on anyone’s end and its hard to know what errors are being encountered

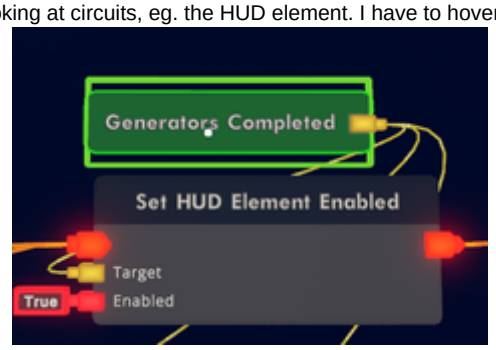
Rob

- As others have said, why is so much tool switching required in the first place? Can tools be more multipurpose?
  - Shortcuts are a big improvement but many slots are taken up just to work how limited the tools are. If tools were more multipurpose then we have room for more useful shortcuts.
  - Please let Connect/Configure do both when working with circuits. Or make a “Circuit“ tool that can!
  - Why is the tool for creating hierarchies (Connect) also used to wire circuits together? Would these make sense as different tools (and so you can do all your circuit wiring/configuring with a single tool)
  - GOOD example: Transform Tool. Now do that for Circuits!
- Double click to re-select is so unintuitive. Use this for Edit?

Aleks

General UGC stuff:

- I feel like room geometry is sometimes getting in the way of understanding circuitry. Would it make sense to have a mode in which room geo is not rendered? Or a mode where lighting is not enabled? Doing flat shading or something like that. StN is super dark atm.
- Doing circuits on PC is hard to target. Compare the flow with Figma/Drawio/any graphing software that exists on PC. Think we should double down on the fact people are already adding extra geometry to help with laying chips out. Instead of enabling only RRS folks to have PC-native circuit manipulation, why not invest in enabling all Creators to do so?
- Following looooooong circuit lines is tedious. In code, when you want to go to a place calling a method, you hit F12. Translated to circuits, maybe hitting right-click over a wire start/stop could provide a context menu with a GoToEnd. Selecting it teleports the player to the other end, orienting towards chip. That can be expanded with a control to GoBack.
- It’s hard to understand where variables/events are used. Same as above, right-clicking on an element could provide some kind of “Find all references” in which the player would be teleported from reference to reference.
- Would it make sense to group circuits somehow, then use that to toggle visibility?
- Some elements are hard to classify when looking at circuits, eg. the HUD element. I have to hover over the out port in order to know what it is.




UGC + RRS

- Scene files in RRS get git dirtied right after opening up the Download window. It makes it hard to understand if I have local changes or not.
- Unity was open, I had changes on a prefab which I git-pushed without a room publish. Riley then git pulled with another change and pushed & published. After that, my Download window was reporting Merge conflicts, even though I shouldn’t have any. Re-opening Unity fixed the issue.
- Last two points lead to a generalized impression that having multiple sources of version control is a lot of mental overhead, and you can easily get out of sync. Are there any plans to unify this, eg. have the Publish/Download automatically perform some git operations under the hood? I think Plastic SCM also had Scene merge capabilities that seemed a lot more advanced than git. Maybe it’s an alternative worth exploring?
- Collaboration needs a lot of manual syncs with collaborators and feels just like what it is, multiple people performing changes on a single big old orange prefab, which can also be modified outside of RRS in-game.
- Inner loop of testing changes locally is long. Updating a prefab, hitting Play Local (wait 7 min), iterating on some throwaway logic in the local instance (unless first pinging to sync for merges), then getting back and hitting Publish  waiting for another 7 minutes to redo the logic. What would it take to be able to hit Play in Unity and get some CV2 iteration in there? Feels like it should just be pulling in locomotion/manipulation controls, as well as CV2 execution bits?